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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,217	02/25/2004	Edmund Arthur Flexman	CL1375USCNT	3035

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E I DU PONT DE NEMOURS AND COMPANY
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EXAMINER

RONESI, VICKEY M

ART UNIT	PAPER NUMBER
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1796

NOTIFICATION DATE	DELIVERY MODE
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04/23/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-Legal.PRC@usa.dupont.com

Office Action Summary	Application No. 10/786,217	Applicant(s) FLEXMAN ET AL.	
	Examiner VICKEY RONESI	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7,8,10-13 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,8,10-13 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/11/2007 has been entered.
2. In light of the amendment filed on 12/11/2007, all outstanding rejections are withdrawn.

Priority

3. It is noted that this application appears to claim subject matter disclosed in prior Application No. 09/889875, filed 7/20/2001. **A reference to the prior application must be inserted as the first sentence(s) of the specification of this application in an application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e), 120, 121, or 365(c).** See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, 121, or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after

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November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A benefit claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If the reference to the prior application was previously submitted within the time period set forth in 37 CFR 1.78(a), but not in the first sentence(s) of the specification or an application data sheet (ADS) as required by 37 CFR 1.78(a) (e.g., if the reference was submitted in an oath or declaration or the application transmittal letter), and the information concerning the benefit claim was recognized by the Office as shown by its inclusion on the first filing receipt, the petition under 37 CFR 1.78(a) and the surcharge under 37 CFR 1.17(t) are not required.

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Applicant is still required to submit the reference in compliance with 37 CFR 1.78(a) by filing an amendment to the first sentence(s) of the specification or an ADS. See MPEP § 201.11.

Specification

4. On page 5 of the response filed on 12/11/2007, applicant's drew attention to an error in wording regarding Magnifin H-51V. According to an unsubmitted reference, Magnifin H-51V is a magnesium hydroxide coated with aminopolysiloxane and not fatty acid as recited on page 16, lines 4-6. A clarification on the record with the unsubmitted reference and an amendment to the specification is suggested.

Claim Objections

5. Claims 7 and 8 are objected to because the term “the saturated fatty acid” does not have full antecedent basis given that claim recites “saturated fatty acids” (emphasis added).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

7. Claims 11-13 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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With respect to claim 11, the terms “the mineral filler,” “the nylon” and “the filler” lack antecedent basis. In the interest of compact prosecution, the “nylon” is considered to be the at least one polyamide and the “filler” is considered to be calcium carbonate or titanium dioxide.

With respect to claims 12, 13, and 15, they are rejected for being dependent on a rejected claim.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

9. Claims 1-5, 7, 8, 10-13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Metzenmacher et al (US 5,827,906) in view of Hyde (US 4,399,246).

Metzenmacher et al discloses a composition comprising flameproofing polymers such as polyamides (col. 3, lines 20-26) and 5-90 wt % (col. 3, lines 46-49) surface-treated filler such as calcium carbonate and titanium oxide (col. 1, lines 34-58) which is treated with 0.01-10 parts by weight per 100 parts by weight filler (col. 2, lines 16-17, lines 45-46) of fatty acids such as stearic acid (col. 2, lines 30-46). For the process of making, see examples which intrinsically include homogenous mixing and cooling steps.

Metzenmacher et al fails to disclose (i) the aspect ratio of the surface-treated filler, (ii) amount of filler in volume %, and (iii) the particle size of the surface-treated filler.

With respect to (i), while Metzenmacher et al does not explicitly disclose the aspect ratio of the surface-treated filler, it is considered that the disclosed particles intrinsically have the

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presently claimed aspect ratio of less than about 5 given that they are the same fillers as presently used and would have same shape since they are not explicitly fibrous or platy.

With respect to (ii), Metzenmacher et al teaches amount of 5-90 wt % surface-treated filler. The converted volume % is about 2-78 vol % when the filler is calcium carbonate and 1-70 vol % the filler is titanium dioxide when using $\rho(\text{polyamide}) = 1.1 \text{ g/cc}$, $\rho(\text{CaCO}_3) = 2.8 \text{ g/cc}$, and $\rho(\text{TiO}_2) = 4.2 \text{ g/cc}$.

With respect to (iii), Hyde discloses a polyamide composition containing mineral fillers and teaches that mineral fillers having a mean average particle size of 0.2-2 microns which is the optimal particle size for impact resistant properties in molded polyamide articles (col. 3, lines 16-18). Note that Metzenmacher et al teaches that improved physical properties such as tensile strength, elongation at break, and modulus are had by using the flame-inhibiting fillers (see Table bridging cols. 7 and 8).

Given that Metzenmacher et al discloses fillers like presently claimed and further given that such fillers optimally have a particle size of 0.2-2 microns for improved impact resistance properties as taught by Hyde, it would have been obvious to one of ordinary skill in the art to utilize a filler with a particle size and shape like typically used.

Response to Arguments

10. Applicant's arguments filed 12/11/2007 have been fully considered but they are not persuasive. Specifically, applicant argues (A) that the compositions of the present invention unexpectedly exhibit an increase in physical properties as shown by data in the specification that is reasonably commensurate in scope with the scope of the claims and (B) that applicant's

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examples are a proper comparison to the closest prior art of Metzenmacher et al because the polysiloxane is not mandatorily present.

With respect to argument (A), the data is not commensurate in scope with the scope of the claims for three reasons. First, only two saturated organic acids are exemplified (i.e., stearic acid and decanoic acid) and only nylons is exemplified as the polyamide. Case law holds that evidence of superior properties in one species insufficient to establish the nonobviousness of a subgenus containing hundreds of compounds). *In re Greenfield*, 571 F.2d 1185, 1189, 197 USPQ 227, 230 (CCPA 1978). Second, the amount of calcium carbonate or titanium dioxide is only exemplified to range from 5-25 vol % (compare to claim language of 1-50 vol %). Case law holds that whether the unexpected results are the result of unexpectedly improved results or a property not taught by the prior art, the “objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support.” In other words, the showing of unexpected results must be reviewed to see if the results occur over the entire claimed range (i.e., scope). *In re Clemens*, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980), MPEP 716.02(d). Third, the criticality for upper limit of the range of spherical diameter of about 0.1 to less than 3.5 microns cannot be established with the data because only criticality is shown for particle sizes of 0.22 (for TiO₂) and 0.7 microns (for CaCO₃) when compared to a filler with a particle size of 3.5 microns. In other words, there is no data supporting that particle size of between 0.22 and 3.5 microns for TiO₂ or between 0.7 and 3.5 microns for CaCO₃ exhibits improved impact properties. Case law holds that evidence is insufficient to rebut a *prima facie* case if not commensurate in scope with the claimed invention. *In re Grasselli*, 713 F.2d 731, 741, 218 USPQ 769, 777 (Fed. Cir. 1983). Furthermore,

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applicant's data does not provide criticality for the claimed invention given that some of the embodiments of the claimed invention do not provide for improved Izod impact properties. In particular, Tables 5, 7, 9, 10, and 11 show comparative data having better Izod impact properties.

With respect to argument (B), the polysiloxane is not optional in Metzenmacher et al. There are two embodiments in Metzenmacher et al, one requiring a fatty acid derivative and optionally a siloxane derivative and one requiring a fatty acid and a siloxane derivative (col. 1, lines 49-65). It is the latter embodiment upon which the examiner relied as basis for an inorganic filler treated with a fatty acid (not a fatty acid derivative). Therefore, the data is not a proper comparison to the closest prior art of Metzenmacher et al which teaches a surface treatment of a saturated fatty acid compound and siloxane derivative. Applicant's comparisons to surface treatments with octa-triethoxy silane and 3-aminopropyl triethoxy silane are not proper comparison to the closest prior art. A proper comparison would be to a surface treatment with unsaturated fatty acid compound and siloxane derivative. Case law holds that comparative showings must compare the claimed subject matter with the closest prior art to be effective. See *In re Burckel*, 592 F.2d 1175, 1179, 201 USPQ 67, 71 (CCPA 1979).

11. Applicant's arguments with respect to Williams (GB 2 301 105) have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

4/16/2008
Vickey Ronesi

/Vickey Ronesi/
Examiner, Art Unit 1796